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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,598	11/30/2006	Mohammad Jilavi	P30581	3388

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EXAMINER	
SIMONE, CATHERINE A	

ART UNIT	PAPER NUMBER
1783	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/591,598	JILAVI ET AL.	
	Examiner	**Art Unit**	
	CATHERINE SIMONE	1783	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _30 March 2010_.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _51-80_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _51-80_ is/are rejected.

7)☒ Claim(s) _54_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Withdrawn Rejections

1. The 35 U.S.C. 102(b) rejection of claims 21, 22, 24, 30, 31, 33 and 34 as anticipated by Floch et al. of record in the previous Office Action mailed 10/30/2009 has been withdrawn due to the Applicant's remarks filed 3/30/2010.

Claim Objections

2. Claim 54 is objected to because of the following informalities: the recitation "on or more" in claim 54 should be corrected to recite "one or more". Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 51, 52, 55-60, 64, 65 and 67-80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mennig et al. (US 6,455,103) in view of Edwards (US 3,493,289).

Regarding claims 51, 52, 55 and 58, Mennig et al. disclose a glass substrate comprising an optical multi-layer system thereon, which substrate is obtainable by (a) applying a first free-flowing composition which comprises nanoscale inorganic solid particles comprising at least one

of a polymerizable and a polycondensable organic group to at least one surface of a glass substrate (*col. 1, lines 49-53*); (b) at least one of polymerizing and polycondensing the organic groups of the solid particles to form a first organically crosslinked layer on the at least one surface (*col. 1, lines 54-56*); (c) applying a second free-flowing composition which comprises nanoscale inorganic solid particles comprising at least one of a polymerizable and a polycondensable organic group to the organically crosslinked layer of (b), the second composition giving rise to a different refractive index than the first composition (*col. 1, lines 57-60*); (d) at least one of polymerizing and polycondensing the organic groups of the solid particles of the applied second composition to form a second organically crosslinked layer on the first organically crosslinked layer (*col. 1, lines 61-63*); (e) optionally, applying a further free-flowing composition which comprises nanoscale inorganic solid particles comprising at least one of a polymerizable and a polycondensable organic group to the organically crosslinked layer of (d) and at least one of polymerizing and polycondensing the organic groups of the solid particles of the further composition to form a further organically crosslinked layer on the second organically crosslinked layer (*col. 1, lines 64-67*); (f) optionally, repeating (e) one or more times to form one or more further organically crosslinked layers (*col. 1, lines 64-67*), and (g) single-stage thermal consolidation of the organically crosslinked layers present and burnout of organic constituents thereof; with the proviso that for the uppermost layer (*col. 2, lines 1-3 and col. 7, lines 62-67*) the nanoscale inorganic solid particles do not comprise a polymerizable or polycondensable organic group, so that for the uppermost layer a polymerization or polycondensation of groups of the solid particles with formation of organic crosslinking does not take place before or during (g) (*col. 7, lines 51-61*).

Mennig et al. fail to disclose a crystalline transparent substrate, such as quartz, which is one of a precious stone and a semi-precious stone.

Edwards discloses a multi-layer coated optical device including a transparent substrate, such as glass or quartz (*col. 4, lines 55-56*). Thus, Edwards shows that both glass and quartz can be used as a substrate in an optical device since both are transparent materials. Therefore, glass and quartz are equivalents materials for use as a transparent substrate in an optical device.

Mennig et al. teach a multi-layered optical system including a glass substrate. Thus, because glass and quartz were art-recognized equivalents at the time the invention was made, as shown by Edwards, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute quartz, a semi-precious stone, for glass as the substrate in Mennig et al. in order to provide a transparent crystalline substrate for an optical system.

Furthermore, it is to be pointed out that claim 51 defines the product by how the product was made. Thus, claim 51 is a product-by-process claim. For purposes of examination, product-by-process claims are not limited to the manipulation of the recited steps, only the structure implied by the steps. See MPEP 2113. In the present case, the recited steps imply a structure having a crystalline substrate comprising a first free-flowing composition which comprises nanoscale inorganic solid particles comprising at least one of a polymerizable and a polycondensable organic group applied to at least one surface of a crystalline substrate and at least one of polymerizing and polycondensing the organic groups of the solid particles to form a first organically crosslinked layer on the at least one surface; and a second free-flowing composition which comprises nanoscale inorganic solid particles comprising at least one of a polymerizable and a polycondensable organic group applied to the first organically crosslinked

layer and the second composition giving rise to a different refractive index than the first composition; and at least one of polymerizing and polycondensing the organic groups of the solid particles of the applied second composition to form a second organically crosslinked layer on the first organically crosslinked layer; and optionally, applying a further free-flowing composition which comprises nanoscale inorganic solid particles comprising at least one of a polymerizable and a polycondensable organic group to the second organically crosslinked layer and at least one of polymerizing and polycondensing the organic groups of the solid particles of the further composition to form a further organically crosslinked layer on the second organically crosslinked layer; and optionally, having one or more further organically crosslinked layers. As clearly described above, the combination of Mennig et al. and Edwards suggests such a product.

Regarding claims 56 and 57, Mennig et al. fail to specifically disclose the substrate being either planar or curved. It would have been an obvious matter of design choice to change the shape of the substrate in Mennig et al. to be either planar or curved, since such a modification would have involved a mere change in the shape of the substrate. A change in shape is generally recognized as being within the level of ordinary skill in the art, absent unexpected results. MPEP 2144.04 (IV).

Regarding claim 59, Mennig et al. disclose two sides of the substrate being provided with an optical multi-layer system (*col. 9, lines 34-42*).

Regarding claim 60, Mennig et al. disclose the substrate comprising a sheet (*col. 9, line 34*).

Regarding claim 64, Mennig et al. disclose the nanoscale particles comprising one or more compounds selected from oxides, sulfides, selenides and tellurides of semimetals and metals (*col. 2, lines 51-55*).

Regarding claim 65, Mennig et al. disclose the polymerizable or polycondensable organic groups comprising organic radicals which comprise at least one of a (meth)acryloyl group, a vinyl group, an allyl group and an epoxy group (*col. 3, lines 25-30*).

Regarding claim 67, Mennig et al. disclose the optical multi-layer system comprising an interference layer system (*col. 8, lines 3-5*).

Regarding claim 68, Mennig et al. disclose the optical multi-layer system comprising an anti-reflection layer system (*col. 8, lines 3-5*).

Regarding claim 69, Mennig et al. disclose one or more organically crosslinked layers being formed at a temperature of up to about 150°C (*col. 7, lines 39-43*).

Regarding claim 70, Mennig et al. disclose one or more organically crosslinked layers being formed at a temperature of up to about 130°C (*col. 7, lines 39-43*).

Regarding claim 71, Mennig et al. disclose the single stage thermal consolidation step being carried out at a temperature of at least 400°C (*col. 7, lines 55-61*).

Regarding claim 72, Mennig et al. disclose the single stage thermal consolidation step being carried out at a temperature of up to 800°C (*col. 7, lines 55-61*).

Regarding claim 73, Mennig et al. disclose the single stage thermal consolidation step being carried out at a temperature of up to 600°C (*col. 7, lines 55-61*).

Regarding claims 74 and 75, Mennig et al. disclose a glass substrate comprising an optical multi-layer system thereon, which substrate is obtainable by (a) applying a first free-flowing composition which comprises nanoscale inorganic solid particles comprising at least one of a polymerizable and a polycondensable organic group to at least one surface of a glass substrate (*col. 1, lines 49-53*); (b) at least one of polymerizing and polycondensing the organic groups of the solid particles to form a first organically crosslinked layer on the at least one surface (*col. 1, lines 54-56*); (c) applying a second free-flowing composition which comprises nanoscale inorganic solid particles and which is deemed to be without at least one of a polymerizable and a polycondensable organic group to the organically crosslinked layer of (b), since the organic constituents are being removed due to burnout (*claim 1 and col. 7, lines 55-67*), the second composition giving rise to a second layer having a different refractive index than the first layer (*col. 1, lines 57-60*), and (d) single-stage thermal consolidation of the organically crosslinked layer and burnout of organic constituents (*col. 7, lines 55-67*).

Mennig et al. fail to disclose a crystalline substrate, such as quartz.

Edwards discloses a multi-layer coated optical device including a transparent substrate, such as glass or quartz (*col. 4, lines 55-56*). Thus, Edwards shows that both glass and quartz can be used as a substrate in an optical device since both are transparent materials. Therefore, glass and quartz are equivalents materials for use as a transparent substrate in an optical device.

Mennig et al. teach a multi-layered optical system including a glass substrate. Thus, because glass and quartz were art-recognized equivalents at the time the invention was made, as shown by Edwards, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to substitute quartz for glass as the substrate in Mennig et al. in order to provide a transparent crystalline substrate for an optical system.

Furthermore, it is to be pointed out that claim 74 defines the product by how the product was made. Thus, claim 74 is a product-by-process claim. For purposes of examination, product-by-process claims are not limited to the manipulation of the recited steps, only the structure implied by the steps. See MPEP 2113. In the present case, the recited steps imply a structure having a crystalline substrate comprising a first free-flowing composition which comprises nanoscale inorganic solid particles comprising at least one of a polymerizable and a polycondensable organic group applied to at least one surface of a crystalline substrate and at least one of polymerizing and polycondensing the organic groups of the solid particles to form a first organically crosslinked layer on the at least one surface; and a second free-flowing composition which comprises nanoscale inorganic solid particles without at least one of a polymerizable and a polycondensable organic group to form a second layer having a different refractive index than the first layer, and wherein the layers have no organic constituents due to burnout. As clearly described above, the combination of Mennig et al. and Edwards suggests such a product.

Regarding claim 76, Mennig et al. disclose the substrate comprising a sheet (*col. 9, line 34*).

Regarding claim 77, Mennig et al. disclose the nanoscale particles comprising one or more compounds selected from oxides, sulfides, selenides and tellurides of semimetals and metals (*col. 2, lines 51-55*).

Regarding claim 78, Mennig et al. disclose the nanoscale particles comprising one or more compounds selected from SiO_2, TiO_2, ZrO_2, ZnO, Ta_2O_5, SnO_2 and Al_2O_3 (*col. 2, lines 55-58*) and the polymerizable or polycondensable organic groups comprise organic radicals which comprise at least one of a (meth)acryloyl group, a vinyl group, an allyl group and an epoxy group (*col. 3, lines 25-30*).

Regarding claim 79, Mennig et al. disclose the single stage thermal consolidation step being carried out at a temperature of from 400°C to 800°C (*col. 7, lines 55-61*).

Regarding claim 80, Mennig et al. disclose the single stage thermal consolidation step being carried out at a temperature of from 400°C to 600°C (*col. 7, lines 55-61*).

5. Claims 53 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mennig et al. (US 6,455,103) in view of Edwards (US 3,493,289) as applied to claims 51 and 60 above, and further in view of Arney et al. (US 6,329,058).

Regarding claims 53 and 63, Mennig et al. and Edwards teach the claimed crystalline substrate comprising an optical multi-layer system thereon, as shown above.

Mennig et al. and Edwards both fail to teach a crystalline substrate comprising silicon and being a silicon wafer.

Arney et al. teach a ceramer coating including nanosize particles being applied to a glass substrate, i.e. silicon wafer for optical applications (*col. 10, lines 13-19 and col. 20, lines 33-34*). Thus, Arney et al. show that a silicon wafer can be used as a glass substrate for optical applications. Therefore, glass and silicon are equivalents materials for use as a transparent substrate in an optical device.

Mennig et al. teach a multi-layered optical system including a glass substrate. Thus, because glass and silicon were art-recognized equivalents at the time the invention was made, as shown by Arney et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute silicon for glass as the substrate in Mennig et al. in order to provide a transparent crystalline substrate for an optical system.

6. Claims 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mennig et al. (US 6,455,103) in view of Edwards (US 3,493,289) as applied to claim 51 above, and further in view of Landau (US 4,188,444).

Regarding claim 54, Mennig et al. and Edwards teach the claimed crystalline substrate comprising an optical multi-layer system thereon, as shown above.

Mennig et al. and Edwards both fail to teach a crystalline substrate comprising PbS or selenium.

Landau teaches that glass can contain selenium in order to form an optical glass (col. 1, lines 60-62 and col. 2, lines 60-64). Thus, Landau shows that optical glass can contain selenium.

Mennig et al. teach a multi-layered optical system including a glass substrate. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the glass substrate in Mennig et al. to include selenium as suggested by Landau in order to provide a transparent crystalline glass substrate for an optical system.

7. Claim 62 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mennig et al. (US 6,455,103) in view of Edwards (US 3,493,289) as applied to claims 51 and 60 above, and further in view of Zimmermann et al. (US 2002/0017452).

Regarding claim 62, Mennig et al. and Edwards teach the claimed crystalline substrate comprising an optical multi-layer system thereon, as shown above.

Mennig et al. and Edwards both fail to teach a crystalline substrate comprising a watchglass of sapphire.

Zimmermann et al. teach antireflection coatings being applied to inorganic optically transparent substrates such as sapphire glass and other kinds of natural glass (*paragraph 0047*). Thus, Zimmermann et al. show that both glass and sapphire glass are inorganic optically transparent materials. Therefore, glass and sapphire glass are equivalents materials for use as a transparent substrate in an optical device.

Mennig et al. teach a multi-layered optical system including a glass substrate. Thus, because glass and sapphire glass were art-recognized equivalents at the time the invention was made, as shown by Zimmermann et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute sapphire glass for glass as the substrate in Mennig et al. in order to provide a transparent crystalline substrate for an optical system.

8. Claims 61 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mennig et al. (US 6,455,103) in view of Edwards (US 3,493,289) as applied to claims 51 and 60 above, and further in view of Forrest et al. (US 6,091,195).

Regarding claim 61, Mennig et al. and Edwards teach the claimed crystalline substrate comprising an optical multi-layer system thereon, as shown above.

Mennig et al. and Edwards both fail to teach a crystalline substrate comprising a sheet of sapphire.

Forrest et al. teach an optical device (light emitting display) including a transparent substrate, such as glass, quartz or sapphire (*col. 4, lines 35-37*). Thus, Forrest et al. show that glass, quartz and sapphire can be used as a substrate in an optical device since they all are transparent materials. Therefore, glass, quartz and sapphire are equivalents materials for use as a transparent substrate in an optical device.

Mennig et al. teach a multi-layered optical system including a glass substrate. Thus, because glass and sapphire were art-recognized equivalents at the time the invention was made, as shown by Forrest et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute sapphire for glass as the substrate in Mennig et al. in order to provide a transparent crystalline substrate for an optical system.

Regarding claim 66, Mennig et al. disclose the nanoscale particles comprising one or more compounds selected from SiO_2, TiO_2, ZrO_2, ZnO, Ta_2O_5, SnO_2 and Al_2O_3 (*col. 2, lines 55-58*) and the polymerizable or polycondensable organic groups comprise organic radicals which comprise at least one of a (meth)acryloyl group, a vinyl group, an allyl group and an epoxy group (*col. 3, lines 25-30*).

Response to Arguments

9. Applicant's arguments, see pages 11-13, filed 3/30/2010, with respect to claims 21, 22, 24, 30, 31, 33 and 34 have been fully considered and are persuasive. The 35 U.S.C. 102(b) rejection of 21, 22, 24, 30, 31, 33 and 34 as anticipated by Floch et al. has been withdrawn.

Applicant's arguments filed 3/30/2010 with regard to the rejections under 35 U.S.C. 103(a) have been fully considered but they are not persuasive.

Applicants argue that "MENNIG makes it clear that the presence of nanoscale particles coated with polymerizable and/or polycondensable groups is necessary in order to be able to densify the corresponding layers without cracking, thereby teaching away from the use of any layers which contain nanoscale inorganic solid particles without polymerizable and/or polycondensable organic groups. For this reason alone, MENNIG fails to render obvious the subject matter of any of the instant claims".

This argument is not deemed persuasive. Mennig teaches that the layers containing nanoscale inorganic solid particles having organic polymerizable and/or polycondensable groups are heated at temperatures of from 400 to 800°C so as to completely remove organic constituents from within the layers, thus the organic polymerizable and/or polycondensable surface groups, which are deemed organic constituents, are being removed from within the layers. Accordingly, the uppermost layer of the multilayered system in Mennig comprises nanoscale particles but does not comprise polymerizable and/or polycondensable organic groups, since the organic groups are being removed when heated at temperatures of from 400 to 800°C. Thus, Mennig teaches an uppermost layer that does not comprise a polymerizable and/or polycondensable organic group as required by new claims 51 and 74.

Applicants then argue “that EDWARDS does not teach or suggest that a crystalline substrate may be used as a substrate for a system comprising linked nanoparticles. For example, according to col. 2, lines 16-21, the primary object of the invention disclosed therein is to provide a compound having a high refractive index and which is capable of being applied as a thin film by the thermal evaporation process at relatively low temperatures”.

This argument is not deemed persuasive. Edwards was merely cited to teach a multi-layer coated optical device which includes a transparent substrate consisting of either glass or quartz (*col. 4, lines 55-56*) to show that glass and quartz are equivalent materials for use as a transparent substrate in an optical device. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute quartz, i.e. crystalline, for glass as the substrate in Mennig et al. in order to provide a transparent crystalline substrate for an optical system, since glass and quartz were art-recognized equivalents at the time the invention was made.

Furthermore Applicants argue “the substrate mentioned in col. 4, lines 35-39 of Forrest is used as a part of a light emitting system. In view thereof, the substrate has to be transparent in order to allow light to pass therethrough. This is the only property that the materials mentioned in FORREST have to have in common. There is no teaching or suggestion in FORREST that these materials are also usable for an optical system according to the present invention (see, for example, instant claims 67 and 68)”.

This argument is not deemed persuasive. Forrest et al. was merely cited to teach an optical device (light emitting display) including a transparent substrate which consists of glass, quartz or sapphire (*col. 4, lines 35-37*) in order to show that glass, quartz and sapphire are equivalents materials for use as a transparent substrate in an optical device. Thus, it would have

been obvious to one of ordinary skill in the art at the time the invention was made to substitute sapphire for glass as the substrate in Mennig et al. in order to provide a transparent crystalline substrate for an optical system since glass and sapphire were art-recognized equivalents at the time the invention was made.

For the reasons given above, claims 51, 52, 55-60, 64, 65 and 67-80 are unpatentable over Mennig et al. in view of Edwards and claims 61 and 66 are unpatentable over Mennig et al. in view of Edwards and further in view of Forrest et al.

Conclusion

10. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CATHERINE SIMONE whose telephone number is (571)272-1501. The examiner can normally be reached on Monday-Friday 9:30-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/
Supervisory Patent Examiner, Art Unit 1783

/CAS/
Catherine A. Simone
Examiner, Art Unit 1783
July 14, 2010